

## MEDICAL AND SCIENTIFIC COMMITTEE ANNUAL LAY REPORT 2008

1	<b>Lay Project Title:</b>	Vaccine for Breast Cancer
2	<b>Grant Holder:</b>	Prof Geoffrey Pietersz
3	<b>Unit/Institution:</b>	Macfarlane Burnet Institute for Medical Research and Public Health
4	<b>Years Funded:</b>	2008-2010
5	<b>Funding 2008:</b>	\$92,346
6	<b>Lay Abstract</b> <i>(please refer to the enclosed guide)</i>	<p>The aim of the research is to develop a vaccine for breast cancer. The white blood cells of the mice or human, if activated such that they can become killer cells specific for the cancer, they will be able to eradicate cancers. Cancer cells are different to normal cells of the body in that they express certain proteins at much higher levels.</p> <p>We have designed a way of modifying synthetic cancer proteins in such a way that they can efficiently generate killer white blood cells in mice. We have used a cancer associated protein called Mucin1 and used this as a model system. This protein is expressed on many different cancers. We have identified parts of this protein that are involved in generating killer cells and linked them to another special vehicle that can deliver it effectively to immune cells. <u>We have shown in this current research that using this strategy we can efficiently generate killer cells in mice.</u> We now have to investigate if these responses are powerful enough to protect mice from cancers.</p> <p>We plan to incorporate several of these proteins in our delivery system in order to kill all the tumour cells because all the cancer cells do not express the same proteins. <u>A vaccine for cancer will be a major achievement because if successful would be able to prevent it as we have with some infectious diseases such as small pox.</u> Furthermore, since this method of delivery can be adapted with any cancer protein it can be used to vaccinate against any cancer.</p>
7	<b>Please list papers (NB: only papers arising from this research project), which have been published, or accepted for publication, in refereed journals by any of the principal investigators during 2008. Please include title, sequence of authors, first and last pages, name, volume and date of journal.</b>	None
8	<b>Please list any symposia\plenary presentations relating to this research project, which were made at major national or international scientific meetings during 2008. Please indicate the level of your contribution, ie poster, speaker, invited speaker or session chair.</b>	<p>Speaker (Ms Nicole Brooks, PhD Student). Australian Society for Immunology Conference, 2008, Canberra.</p> <p>Poster (Ms Nicole Brooks, PhD Student), Tumour Immunolgy Workshop, ASI, 2008, Canberra.</p>
9	<b>Certification by Grant Holder</b>	

I confirm that the above details are correct.

Signature: G. A. Pietersz Date: 23 Feb 08

Name (please print):

Prof Geoffrey A Pietersz

THANK YOU FOR YOUR ASSISTANCE